There were no lesions of the cortex or central gray masses, though the cord was smaller than is normal in adults. The anterolateral columns of the cord were smaller, but the posterior appeared to be normal, as viewed by the microscope, except at one part to be mentioned. The left anterior horn was a little smaller than the right. The motor cells were equally numerous on the two sides and appeared as in normal cords. Between the first and second cervical segments there was a circumscribed lesion. The posterior horns at this level were destroyed and replaced by sclerotic tissue extending into the lateral columns and containing numerous vessels. There were also many thickened vessels in the posterior columns, but no sclerotic tissue. Ascending degeneration was not observed in the posterior columns, but the pyramidal tracts presented retrograde and descending degeneration.

Dejerine states that this second case demonstrates that the symptoms of Little's disease may be due to a primary, focal, spinal lesion, which has developed during the intrauterine period, and is possibly the result of an infectious process. The sclerosis and agenesis of the crossed pyramidal tracts were probably due to this focal lesion. The explanation for the predominance of the symptoms in the lower limbs is not easily found. SPILLER.

MOTOR AND SENSORY APHASIA.

Mantle (British Med. Jour., Feb. 6, 1897) reports two cases of aphasia that seem to merit rather complete notice. The first especially is interesting and instructive.

The patient was an artist; there was a suspicion of syphilis, but no positive evidence of it.

At the age of 31 he suffered from several slight epileptic convulsions, and after one of them was paralyzed on the right side and was aphasic, but recovered completely in 14 weeks except that some slight weakness of the leg remained. A year later he had a similar but less pronounced attack. He completely recovered from this and went back to work, but suffered from headache. At the age of 41 he awoke one morning perfectly conscious, but speechless. Examination the same evening disclosed complete motor aphasia with slight weakness of the right side of the body. He could write correctly, but was emotional and easily excited. He gradually became drowsy and the hemiplegia became complete. There was gradual improvement up to the 11th week, when in the course of three days he became totally deaf, blind and dysphagic; the pupils reacted to light and the optic fundi were normal. He remained deaf and blind for ten days, but could recognize his wife and the nurse by touch. He gradually regained sight and hearing, and what is peculiar, could at first recognize sounds at a distance (the barking of a dog, a piano in the adjoining house), but not near by. This fact was recognized by the patient and he inquired about it by writing on the coverlet with his finger. It was now found that he had right hemiopia, and could recognize whispered words, but not those spoken in a loud voice. After ten days of improvement he again became entirely blind and deaf, and communicated with others like a blind, uneducated deaf-mute, but it is worthy of remark that he retained the conception of color and form; e. g., to express his wish for milk and soda he pointed to the sheet to indicate white and drew the form of a siphon in the air with his finger. To indicate a chop he drew the form of it in the same way, and likewise indicated that he wished some lilies of the valley placed in his hand. After a few days sight returned, although he remained hemiopic, he was able to speak somewhat, and motion in the extremities improved but they were very sensitive to touch. He now again understood a few whispered words. As hearing improved it was found to be better on the right side than on the left, and the sense of smell was distinctly impaired on the left. Gradual improvement followed, but six months after the attack memory was almost *nil*, and after ten months he was still hemiopic and speech was very poor. About ten and a half months after the attack he awoke from a nap with a dazed look, and was found to be hemiplegic. By the following morning sight was lost, hearing for words abolished, although it remained acute for sounds, and he had complete agraphia, but could communicate by means of signs. The blindness and word-deafness lasted four weeks. "While deaf and blind to words, as well as having complete paralysis of motor speech, he expressed a wish to make his will, and made his wishes known by forming the outline of the letters on the sheet of the bed. He also made his lawyer and wife understand that when they meant 'yes' they were to tap his hand, and when 'no' they were to cross it. To satisfy him the will was executed, and with his left hand he very badly wrote his signature."

He again gradually regained motion and his faculties, the motor part of speech being the slowest to improve, as he was unable to speak for thirty-two weeks after the beginning of this second part of the attack. Two years after the beginning of the trouble he could walk slowly with the aid of crutches, and soon after began to take great pleasure in sketching from nature, although his mind was a complete blank with regard to paintings he had done before his illness.

"It was very curious, how in the early period of his convalescence movement of the body, that is, to another room, brought on the sensory disturbance of speech for perhaps twenty-four hours. This occurred on three or four occasions."

The author continues: "Four years have now elapsed since the attack came on, and I have quite recently had a chat with the patient in his studio. He tells me he has tried hard to paint during the last year, but he is so disgusted with his work that he has practically given it up. To my uncritical eye his work looks very passable. He says, hower, that his difficulty is in trying to remember how he used to do it, and when he finds he is doing the thing wrong, he is so dissatisfied with his efforts that he has ceased making further attempts. He can, however, do pen and ink work exceedingly well. On asking him if he remembered painting the pictures about his room, he said he did not, but still thinks he saw another man paint one of them. He described himself as being a better judge and more critical than ever he was before, but no workman; and this is not through want of muscular power, for that has quite recovered."

"He has a very good vocabulary, however, when talking, and never wants for a word, though there is sometimes an occasional hesitancy in pronunciation. Contrary to Lichtheim's experience, the sensory aphasia in this case of total aphasia cleared up before the motor."

Case 2 was a man undoubtedly syphilitic. Five years before there had occurred a sudden paralysis of the extensors of the left forearm from which he recovered, and two years and a half later he had epileptoid seizure with some weakness on the right side. He also recovered from this, but at intervals had slight fits. One of these, which was attended with twitching of the right face, ushered in the present trouble. On examination he was found to be language deaf, answering to all question: "I really cannot tell you, I am sure, just now." He could not read or recognize most objects. There was no paralysis and "the motor part of speech was good," but in the next paragraph the author says: "Some things shown he remembered easily and could pronounce their name, others he could not name; but if he thought for a time he sometimes gave the correct name or a similar sounding word, or substitute a roundabout phrase as an equivalent. Occasionally, when taken suddenly, he seemed to answer instinctively and generally correctly. A pencil he knew the use of, but could not name. A pen he called 'pea,' then pen. A knife and fork and book he knew, but called a bottle 'brot,' and medicine he could only pronounce partially. This would seem to us to indicate that there was also some motor aphasia. He was agraphic to spontaneous effort, but could copy, although incorrectly. There was improvement for a few weeks, when he was found unconscious and after this passed off there was hemiplegia of the right side and complete aphasia. He again improved, but six weeks later had another seizure, followed by complete right hemiplegia and speechlessness. He was restless and noisy and removed from the hospital.

We may quote from the author's comments on the first case without endorsing them.

"The centre for motor speech (the posterior part of the third frontal convolution and the lower part of the ascending frontal on the left side) were first affected, and the ascending frontal convolution containing also the cortical centres for the movement of the tongue and lips accounts for the early loss of these movements in this case. The part of the brain concerned in the sense of hearing was next affected, which is the posterior half of the first temporo-sphenoidal convolution on the left side. When this region is diseased there is often transient deafness in the opposite ear, as was the case here. The fact observed that he could hear a whisper and understand the word when whispered very softly and slowly is one I find no record of, but points, I think, to over-stimulation of the centre by the ordinary voice, preventing perception of sound characters. The hearing of both ears went simultaneously, but the right, or that on the opposite side of the lesion, was the first to recover."

In a word blindness a lesion of the first temporal convolution is found in the majority of cases. The hemianopsia was probably due to involvement of the occipital lobe, for the pupil still continuing to respond to light supports Wernicke's suggestion that the symptom is then due to a lesion in the occipital cortex. The amaurosis which has been present in both attacks was probably cortical also. The optic nerve always looked healthy. Mind or object blindness was part of visual disturbance. It has been produced artifically by Munk in dogs by extirpating parts of the occipital lobe. Loss of smell, which was associated with the sensory aphasia, is thought by Gowers to be due to softening of the root fibres at the commencement of the fissure of Sylvius. I have not mentioned the fact before, but this patient had visual hallucinations to which Prof. Henschen, in his work on Pathology of the Brain, directs attention, as likely to trouble a patient with homonymous hemianopsia when that symptom is of cortical origin. He said he could always see in the blind half of the field of vision a man at the back of his head holding two lighted candles. Bastrih has strongly pointed out that lesions in the posterior parts of the brain are more apt to produce hallucination than lesions in the middle or anterior parts. The amount of sensory disturbance was very remarkable in this case, and might have suggested at an early period a purely functional origin; but as Wyllie says, in Disorders of Speech, "The very existence of word deafness or word blindness in any case should suggest an organic rather than a functional cause.' "

In the same journal Allan reports a most unusual case of complete aphasia.

A bricklayer, aged 34, after being a teetotaler for seven months had again been drinking for two weeks, when while walking on the street, he felt some dizziness and noticed a slight weakness of the left leg. On arriving at his home he discovered that he was unable to articulate a single word, although able to express himself freely in writing. On examination the following morning he complained of occasional attacks of faintness, of a swimming sensation in the head, and of a tingling in left leg up to the knee.

The apex beat was outside the nipple-line and an aortic direct murmer was present. Intelligence, memory and attention were good; he understood all questions and answered them promptly and correctly in writing, but could not utter a word. He could understand what he read, copy words and figures, write spontaneously and from dictation.

Although his general condition improved and he resumed work, loss of speech remained absolute until nine weeks after its disappearance. While at work he fell a distance of six feet, landing on his head. He was somewhat stunned, but almost immediately called his companion by name, and from that time was able to talk. The author reaches no conclusion as to the nature of the case. PATRICK.

HEMIANOPSIA IN CEREBRAL ABSCESS OF OTIC ORIGIN. Lannois and Jaboulay. Gaz. Med. de Paris, 37, 1896.

The authors report a case of cerebral abscess due to extension from an otitis purulenta, which, according to their researches, is the ninth case in literature giving right-sided hemianopsia.

Further symptoms were agraphia, alexia, optic aphasia and right-sided facial paralysis. Upon autopsy there was found diffuse encephalitis of the central lobe of the left hemisphere and at the base of the first frontal convolution; and in addition a large abscess involving the greater part of the central portion of the left occipital lobe. JELLIFFE.

EXPERIMENTS ON OPERATIVE EXPLORATION OF THE BRAIN. Payr. Centralb. für Chirurgie, No. 31, 1896.

To determine what could be learned by exploration through very narrow openings in the skull, the author performed a series of experiments upon dogs. He made use of drills 1 and 1½ to 2 mm. in diameter, with adjustable shields (to prevent sudden perforation and wounding of underlying structures), operating with all aseptic precautions. The questions which he attempted to decide were: 1. If it was possible with straight and curved exploring needles to reach collections of fluid beneath the membranes or in the brain substance. 2. If using little harpoons of special construction, particles of brain substance or membranes could be removed and examined microscopically. 3. If it could be determined whether the dura pulsated or not For this latter purpose he used little glass tubes filled with sterilized water, and also closed tubes with end drawn fine, and bent at a right angle, to serve as indicators. The five dogs operated upon recovered promptly, and seemed to have experienced no ill results. All the questions were decided affirmatively. To determine how far he could reach with the exploring needle, he injected through the drill-hole the brain of a dog—dead from another experiment—with alcoholic methylene blue solution, and found on section that the fluid was distributed over 10 to 12 cm. of surface, and penetrated 4 to 6 cm. An autopsy made three weeks after the operation, showed healing with adhesion between dura and bone, and with but a slight depression where the brain substance had been removed by the harpoon. The opening in the bone was filled with a firm reddish-yellow mass. He does not attempt to say how far this procedure is applicable to human beings, but suggests that it may be of use in locating hemorrhages, cysts, or tumors, and obtaining specimens for microscopical examination; also for tapping the lateral ventricles. C. L. ALLEN.

POLIENCEPHALOMYELITIS.

The disease is most common in persons between 20 and 60 years of age. It is usually subacute in onset, rarely acute or insidious, at